

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/648,973 Confirmation No. 4144
Appellant : Larry L. Johnson
Filed : 08/27/2003
Title : RECTIFIER-SUPER CAPACITOR DEVICE FOR USE IN A POWER
SYSTEM FOR A TELECOMMUNICATION FACILITY
Group Art Unit : 2836
Examiner : Adi Amrany
Docket No. : 2232/SPRI.103532
Customer No. : **32423**

EFS – 06/22/2007

APPELLANT’S AMENDED APPEAL BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This is an Appeal from a Final Office Action dated December 15, 2006, rejecting claims 6-12. These claims have been at least twice rejected, with the latest version of the amended claims filed with the Office in the Response dated October 19, 2006. The Appellant originally filed a Notice of Appeal (filed February 15, 2007) within the time period provided under § 1.134 accompanied by the fee set forth in 37 C.F.R. § 4 1.20(b)(1), and submitted a first version of this Brief within the two-month deadline of April 16, 2007 (including Saturdays, Sundays and Federal Holidays) along with an authorization to charge the \$500 fee set forth in § 41.20(b)(2). In response to the Notification of Non-Compliant Appeal Brief mailed May 23, 2007, the Appellant hereby submits this Amended Brief. The Commissioner is hereby authorized to charge any fee that may be due, or credit any overpayment, to Deposit Account No. 21-0765.

Contents

I.	Real Party In Interest	4
II.	Related Appeals and Interferences.....	4
III.	Status of Claims	4
IV.	Status of Amendments	4
V.	Summary of Claimed Subject Matter	4
	Claim 1	5
VI.	Grounds of rejections to be reviewed on Appeal.....	5
VII.	Argument	6
	A) The rejection of claims 6 and 11-12 under 35 U.S.C. § 103(a) as being obvious over the ‘593 Jungreis reference in view of the ‘940 Jungreis reference should be reversed because the Examiner has failed to establish a <i>prima facie</i> case of obviousness.	7
	B) The rejection of claims 7-10 under 35 U.S.C. § 103(a) as being obvious over the ‘593 and ‘940 Jungreis references in view of the Welches reference should be reversed because the Examiner has failed to establish a <i>prima facie</i> case of obviousness.	9
VIII.	Claims Appendix	12
IX.	Evidence Appendix	14
X.	Related-Proceedings Appendix.....	14

I. REAL PARTY IN INTEREST

The real party in interest is SPRINT COMMUNICATIONS COMPANY L.P., a limited partnership duly organized and existing under the laws of the State of Delaware, United States of America. The mailing address for purposes of this Appeal is 6391 Sprint Parkway, Overland Park, Kansas 66251-2100, “attention Steve Funk or Sally Werts.”

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF CLAIMS

Claims 6-12 are pending, and the rejection of each of those claims is being appealed. Claims 1-5 and 13-20 have been cancelled.

IV. STATUS OF AMENDMENTS

No after-final amendments have been submitted.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The instant Application includes independent claim 6, and claims 7-12 depending directly or indirectly from claim 6.

Claim 6

Claim 1 recites a power supply system for providing reliable electric power to a telecommunications facility that contains telecommunications equipment, including the combination of an AC power source in the form of at least one microturbine generator operable to produce AC electrical power and adapted to be powered by a fuel (specification ¶¶ 0017-0018, 0020-0021 and 0030-0032; microturbines 10 of FIG. 1 and microturbines 390 of FIGS. 2A and 2B) and a plurality of individual rectifier/super capacitor devices each including a rectifier and a super capacitor housed together whereby the rectifier converts AC electrical power to DC electrical power adaptable to power the telecommunication equipment (specification ¶¶ 0024 and 0038; rectifier/super capacitor device 480 of FIGS. 2B and 4) and further requiring that each individual rectifier/super capacitor device also includes at least three connection points to which other devices may be coupled, the first connection point coupled internally to a rectifier AC input, the second connection point coupled internally to a rectifier DC output and a first side of said super capacitor, and the third connection point coupled internally to a second side of said super capacitor, such that the AC power source is coupled to the first connection point, the second connection point is coupled to the telecommunication facility, and the third connection point is coupled to ground (specification ¶¶ 0024 and 0038; connection points 520, 540, and 570, rectifier input 510, rectifier output 530, super capacitor first side 550 and second side 560 of FIG. 4).

VI. GROUNDS OF REJECTIONS TO BE REVIEWED ON APPEAL

A) Claims 6 and 11-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the first Jungreis reference (U.S. Patent No. 6,184,593) in view of the second Jungreis reference (U.S. Patent No. 6,541,940).

B) Claims 7-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the first and second Jungreis references (U.S. Patent Nos. 6,184,593 and 6,541,940) in view of the Welches reference (U.S. Patent No. 6,404,655).

Appellant respectfully traverses all these rejections.

VII. ARGUMENT

The basic requirements of a *prima facie* case of obviousness are summarized in MPEP § 2143 through § 2143.03. In order “[t]o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success [in combining the references]. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Appellant’s disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).” MPEP § 2143. Further, in establishing a *prima facie* case of obviousness, the initial burden is placed on the Examiner. “To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).” *Id.* See also MPEP § 706.02(j) and § 2142.

Moreover, the teaching or suggestion, and the reasonable expectation of success must be found in the prior art and not be based on Appellant's disclosure. *See* MPEP § 706.02(j), § 2142, and § 2143.

When evaluating the scope of a claim, every feature in the claim must be considered. Office personnel may not dissect a claimed invention into discrete elements and then evaluate the elements in isolation. Instead, the claim as a whole must be considered. MPEP §2106 II C.

A) The rejection of claims 6 and 11-12 under 35 U.S.C. § 103(a) as being obvious over the '593 Jungreis reference in view of the '940 Jungreis reference should be reversed because the Examiner has failed to establish a *prima facie* case of obviousness.

Claims 6 and 11-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the first Jungreis reference (U.S. Patent No. 6,184,593) in view of the second Jungreis reference (U.S. Patent No. 6,541,940)

In particular, the collective disclosure of the references fail to teach or suggest a system that provides a power supply to a telecommunications facility through the combination of an AC power source including at least a microturbine generator powered by a fuel source, as well as a number of individual rectifier/super capacitor devices each formed as a rectifier and a super capacitor housed together such that the rectifier converts AC electrical power to DC electrical power, and wherein each rectifier/super capacitor device also includes (a) a first connection point coupled internally to a rectifier DC output, (b) a second connection point coupled internally to a first side of the super capacitor, and (c) a third connection point coupled internally to a second side of the super capacitor, the AC power source being coupled to the first connection point, the second connection point being coupled to the telecommunications facility, and the third connection point being coupled to ground.

The '593 Jungreis reference, cited by the Office, merely shows a single UPS 12 (power supply) having therein a plurality of rectifiers/inverters (DR1...) connected together with a DC bus 12-1 that itself connects with DC bus capacitors 12-2. The Appellant's system includes a plurality of individual, distinct rectifier/super capacitor devices (as one example, device 480 in FIG. 4, a number of which may substitute for the rectifiers 140 and super capacitors 170 in the system of FIG. 1). Accordingly, '593 Jungreis fails to disclose distinct, individual rectifier/super capacitor devices, each including a rectifier and a super capacitor housed together. The '593 Jungreis reference merely discloses a number of rectifiers and a number of capacitors in a single UPS unit, not individual devices that pair up a rectifier and a super capacitor. *See* Paragraph 0024 of the Appellant's specification.

The Office has stated that '593 Jungreis discloses individual rectifiers coupled to individual capacitors to form paired devices. However, items DR and F in FIGS. 3 and 4 identified by the Office merely provide a paired rectifier/filter arrangement, not a rectifier/super capacitor device. Moreover, the capacitors 12-2 in '593 Jungreis are connected with a plurality of rectifiers DR₁, DR₂, etc., through DC bus 12-1, as stated above. This is a disadvantageous arrangement because if DC bus 12-1 were to fail and break the circuit, the rectifiers would be completely cut off from the capacitors in the power supply of '593 Jungreis.

On the other hand, the Appellant's invention as claimed includes distinct, individual rectifier/super capacitor devices, such as device 480 of FIGS. 2B and 4 of the present application. Thus, if one distinct rectifier/super capacitor device fails, other rectifier/super capacitor devices can still deliver DC output power to the telecommunications facility coupled to the second connection point of such devices that are working properly. Accordingly, the claimed power supply system incorporating individual rectifier/super

capacitor devices, each having a rectifier and a super capacitor housed together, is not taught nor suggested in '593 Jungreis, and provides a specific utility not achievable with the system of the cited reference.

The '940 Jungreis reference, cited by the office, fails to provide the disclosure or teachings lacking in the '593 Jungreis reference, including a power supply system incorporating individual rectifier/super capacitor devices, each having a rectifier and a super capacitor housed together, along with other claimed limitations. As the Examiner noted, '940 Jungreis merely discloses a power generation system that provides a battery/generator based system for providing power to certain telecommunications equipment.

As '593 Jungreis in view of '940 Jungreis fails to teach or suggest all the limitations of the independent claim, a *prima facie* case of obviousness has not been made for independent claim 6 with respect to these references. Accordingly, Appellant respectfully requests withdrawal of the § 103(a) rejection of this claim. Further, as claims 11-12 depend directly or indirectly from independent claim 6, Appellant requests withdrawal of the rejection of these claims as well.

B) The rejection of claims 7-10 under 35 U.S.C. § 103(a) as being obvious over the '593 and '940 Jungreis references in view of the Welches reference should be reversed because the Examiner has failed to establish a prima facie case of obviousness.

Claims 7-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the first and second Jungreis references (U.S. Patent Nos. 6,184,593 and 6,541,940) in view of the Welches reference (U.S. Patent No. 6,404,655).

Claims 7-10 depend directly or indirectly from independent claim 6. As stated above, the '593 and '940 Jungreis references fail to teach or suggest a power supply system incorporating individual rectifier/super capacitor devices, each having a rectifier and a super

capacitor housed together, as required by claim 6 of the present application. Welches also fails to teach or suggest such a power supply system. Welches merely discloses a power inventor for use with a microturbine generator. There is no disclosure in Welches relating to individual rectifier/super capacitor devices, where a DC output power can be delivered to the telecommunications facility coupled to the second connection point of such devices.

Accordingly, the '593 and '940 Jungreis and the Welches reference, taken in the singular or in combination, fail to teach or suggest all of the limitations of independent claim 6 of the present application. Therefore, a *prima facie* case of obviousness has not been made for independent claim 6 with respect to the '593 and '940 Jungreis references in view of the Welches reference, and it follows that claims 7-10 depending directly or indirectly from independent claim 6, are also not obvious in light of the references of record. Appellant respectfully requests withdrawal of the § 103(a) rejection of claims 7-10.

In light of the above arguments, Appellant submits that claims 6-12 are in condition for allowance. As such, Appellant respectfully requests that a timely Notice of Allowance be issued in this case. Should there be any unresolved matters, please contact the undersigned.

Respectfully submitted,

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Attorney Docket No. 2232/SPRI.103532

Appendices follow.

VIII. CLAIMS APPENDIX

1-5. (Cancelled)

6. (Previously presented) A power supply system for providing reliable electrical power to a telecommunications facility, said facility containing telecommunications equipment, said system comprising:

an AC power source; and

a plurality of individual rectifier/super capacitor devices, each device including a rectifier and a super capacitor housed together wherein the rectifier is operable to convert said AC electrical power to DC electrical power adaptable to power said telecommunication equipment;

wherein each of said individual rectifier/super capacitor devices also includes at least three connection points to which other devices may be coupled, the first connection point coupled internally to a rectifier AC input, the second connection point coupled internally to a rectifier DC output and a first side of said super capacitor, and the third connection point coupled internally to a second side of said super capacitor;

wherein said AC power source is coupled to said first connection point, said second connection point is coupled to said telecommunication facility, and said third connection point is coupled to ground; and

wherein said AC power source is at least one microturbine generator operable to produce AC electrical power and adapted to be powered by a fuel.

7. (Original) The system of claim 6 wherein said fuel for said at least one microturbine generator is natural gas.

8. (Original) The system of claim 7 wherein said natural gas is supplied by a commercial utility.

9. (Previously presented) The system of claim 6 wherein said fuel for said at least one microturbine generator is propane.

10. (Original) The system of claim 9 wherein said propane is stored on site.

11. (Previously presented) The system of claim 6 wherein said AC power source is a commercial electric utility.

12. (Previously presented) The system of claim 6 further including a first switching mechanism that is operable either to couple at least one microturbine generator to said first connection point or to couple a commercial electric utility to said first connection point.

13-20. (Cancelled)

IX. EVIDENCE APPENDIX

Not applicable

X. RELATED-PROCEEDINGS APPENDIX

Not applicable